CLAIMS

What is claimed is:

1.   A method for interacting with a client in a distributed computing environment
having a plurality of computing nodes interconnected to form a cluster, the

5   method comprising:

          connecting a client to a master node of the cluster;

          associating a message list to the client on the master node;

          performing tasks for the client on a plurality of nodes of the cluster;

          detecting an event while performing one of the tasks;

10   storing a message on the message list descriptive of the detected event;
and

          communicating the message to the client.

2.   The method of Claim 1 wherein the event is detected on a node different from
the master node.

15 3.   The method of Claim 1 further comprising, on the master node, establishing an
object unique to the client for interfacing with the client.

4.   The method of Claim 3 wherein the object is accessible across the cluster.

5.   The method of Claim 1 wherein communicating comprises formatting a message
code into a message string.

20 6.   The method of Claim 1 wherein storing comprises formatting a message code
into a message string.

7.   The method of Claim 1 further comprising structuring the message list as a stack.

8.   The method of Claim 1 further comprising failing over the master node to another node on the cluster in response to a failover event on the master node.

9.   The method of Claim 1 wherein the event is an error event.

5   10.   The method of Claim 1 wherein the event is a dialogue event.

11.   A method for interacting with a client in a distributed computing environment having a plurality of computing nodes interconnected to form a cluster, the method comprising:

        connecting a client to a master node of the cluster;

10   creating a distributed object on the master node to interface with the client;

        associating a client manager having a message list with the client on the master node;

        performing tasks for the client on a plurality of nodes of the cluster;

15   detecting an event while performing one of the tasks;

        storing a message on the error list descriptive of the detected event; and

        communicating the message to the client through the distributed object.

12.   The method of Claim 11 further comprising, in the client manager, tracking a plurality of contexts for the client, each context having a respective message list.

20 13.   The method of Claim 11 wherein the event is detected on a node different from the master node.

14. The method of Claim 11 wherein communicating comprises formatting a message code into a message string.

15. The method of Claim 11 wherein storing comprises formatting a message code into a message string.

5 16. The method of Claim 11 further comprising structuring the message list as a stack.

17. The method of Claim 11 further comprising failing over the master node to another node on the cluster in response to a failover event on the master node.

18. The method of Claim 11 wherein the event is an error event.

10 19. The method of Claim 11 wherein the event is a dialogue event.

20. A system for interacting with a client in a distributed computing environment having a plurality of computing nodes interconnected to form a cluster, the system comprising:

a master node of the cluster connected to a client;

15 a message list associated with the client on the master node;

a plurality of tasks executing for the client on a plurality of nodes of the cluster;

an event detected while performing one of the tasks;

a message stored on the message list descriptive of the detected event;

20 and

an interface for communicating the message to the client.

21. The system of Claim 20 wherein the event is detected on a node different from the master node.

22. The system of Claim 20 further comprising, on the master node, an object unique to the client for interfacing with the client.

5 23. The system of Claim 22 wherein the object is accessible across the cluster.

24. The system of Claim 20 wherein a message code is formatted into a message string for communication to the client.

25. The system of Claim 20 wherein a message code is formatted into a message string for storage on the message list.

10 26. The system of Claim 20 wherein the message list is structured as a stack.

27. The system of Claim 20 further comprising a fail safe module for failing over the master node to another node on the cluster in response to a failover event on the master node.

28. The system of Claim 20 wherein the event is an error event.

15 29. The system of Claim 20 wherein the event is a dialogue event.

30. A system for interacting with a client in a distributed computing environment having a plurality of computing nodes interconnected to form a cluster, the system comprising:

a master node of the cluster connected to a client;

20 a distributed object on the master node to interface with the client;

a client manager having a message list associated with the client on the master node;

a plurality of tasks for the client executing on a plurality of nodes of the cluster;

5   an event detected while performing one of the tasks;

a message stored on the error list descriptive of the detected event; and

an interface for communicating the message to the client through the distributed object.

31.   The system of Claim 30 further comprising a plurality of contexts for the client,
10   each context having a respective message list and tracked by the client manager.

32.   The system of Claim 30 wherein the event is detected on a node different from the master node.

33.   The system of Claim 30 wherein a message code is formatted into a message string for communication to the client.

15 34.   The system of Claim 30 wherein a message code is formatted into a message string for storage on the message list.

35.   The system of Claim 30 wherein the message list is structured as a stack.

36.   The system of Claim 30 further comprising a fail over module for failing over the master node to another node on the cluster in response to a failover event on the
20   master node.

37.   The system of Claim 30 wherein the event is an error event.

38. The system of Claim 30 wherein the event is a dialogue event.

39. An article of manufacture, comprising

a computer usable medium;

a set of program instructions recorded on the medium, including a method

for interacting with a client in a distributed computing environment having a

plurality of computing nodes interconnected to form a cluster, the method

comprising:

connecting a client to a master node of the cluster;

associating a message list to the client on the master node;

performing tasks for the client on a plurality of nodes of the

cluster;

detecting an event while performing one of the tasks;

storing a message on the message list descriptive of the detected

event; and

communicating the message to the client.

40. The article of Claim 39 wherein the event is detected on a node different from the master node.

41. The article of Claim 39 wherein the method further comprises, on the master node, establishing an object unique to the client for interfacing with the client.

42. The article of Claim 41 wherein the object is accessible across the cluster.

43. The article of Claim 39 wherein communicating comprises formatting a message code into a message string.

44.   The article of Claim 39 wherein storing comprises formatting a message code into a message string.

45.   The article of Claim 39 wherein the method further comprises structuring the message list as a stack.

5   46.   The article of Claim 39 wherein the method further comprises failing over the master node to another node on the cluster in response to a failover event on the master node.

47.   The article of Claim 39 wherein the event is an error event.

48.   The article of Claim 39 wherein the event is a dialogue event.

10   49.   An article of manufacture, comprising:

      a computer usable medium;

      a set of program instructions recorded on the medium, including a method for interacting with a client in a distributed computing environment having a plurality of computing nodes interconnected to form a cluster, the method

15   comprising:

      connecting a client to a master node of the cluster;

      creating a distributed object on the master node to interface with the client;

      associating a client manager having a message list with the client

20   on the master node;

      performing tasks for the client on a plurality of nodes of the cluster;

      detecting an event while performing one of the tasks;

storing a message on the error list descriptive of the detected

event; and

communicating the message to the client through the distributed

object.

5   50.   The article of Claim 49 wherein the method further comprises, in the client

manager, tracking a plurality of contexts for the client, each context having a

respective message list.

51.   The article of Claim 49 wherein the event is detected on a node different from the

master node.

10   52.   The article of Claim 49 wherein communicating comprises formatting a message

code into a message string.

53.   The article of Claim 49 wherein storing comprises formatting a message code

into a message string.

54.   The article of Claim 49 wherein the method further comprises structuring the

15   message list as a stack.

55.   The article of Claim 49 wherein the method further comprises failing over the

master node to another node on the cluster in response to a failover event on the

master node.

56.   The article of Claim 49 wherein the event is an error event.

20   57.   The article of Claim 49 wherein the event is a dialogue event.